Some Bike Infrastructure Is Worse Than None at All

It's time to put the sharrow to rest.

By Eric Jaffe
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Denver gave rise to the sharrow in the early 1990s, and now two researchers there offer a compelling case to put the lowly form of bike infrastructure to rest.

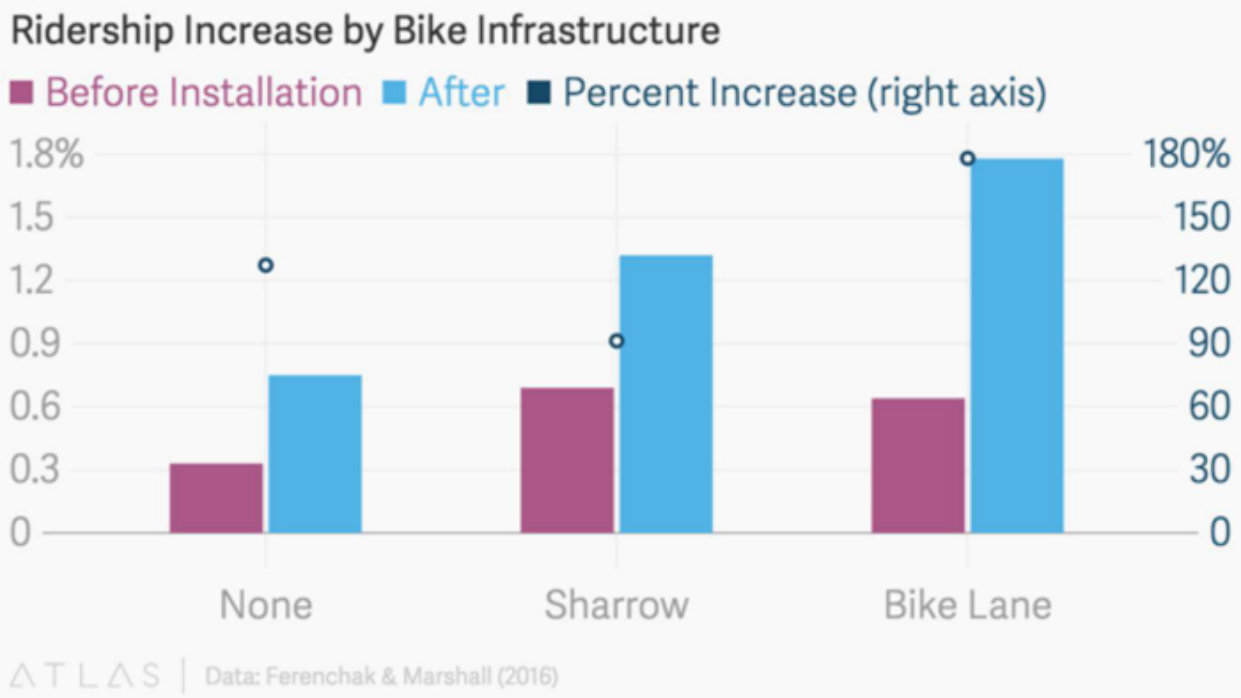
You've seen a sharrow painted on city streets: it's that image of a cyclist below two arrows in the middle of a lane that—you guessed it—is meant to be shared by bikes and cars. The Federal Highway Administration gave sharrows its official blessing in 2009, and the symbol is now ubiquitous across urban America. It's also arguably the least-loved nod to cycling, a low-cost way

for cities to say they're doing something about safety and street design without really doing much at all.

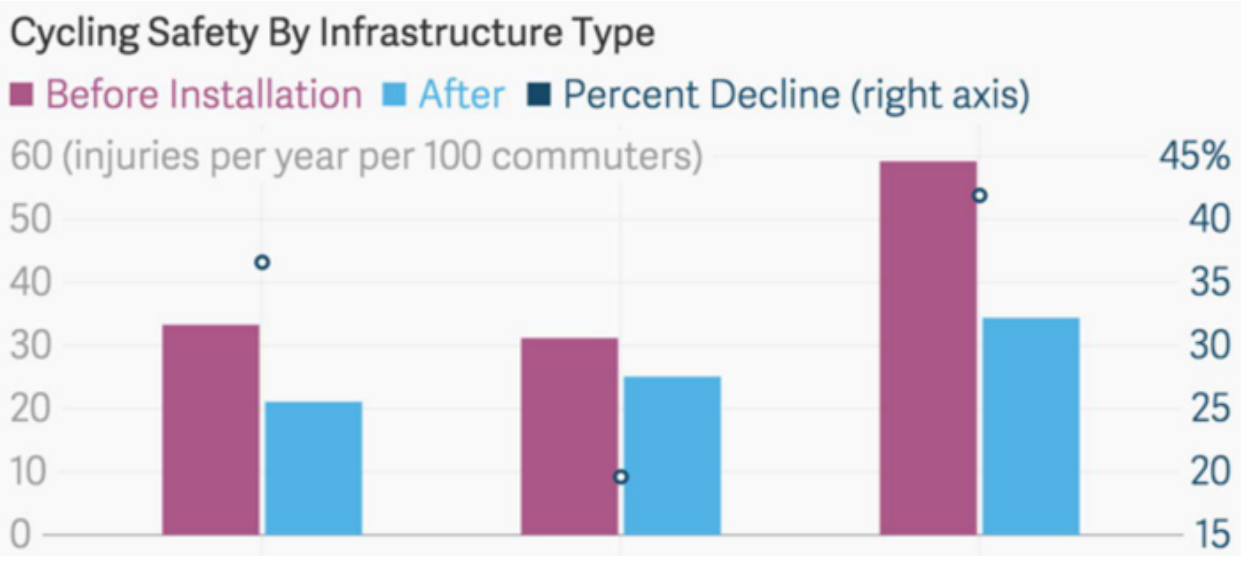
But far from giving cyclists a safer ride, or even doing nothing at all, sharrows might actually be doing some harm by tugging bikes into moving traffic. Some research has found they do reduce dooring (when the door of a parked car hits a cyclist). But only one study to date looked at whether or not sharrows had any impact on overall car-bike collisions–and that study found they could be *increasing* the risk of injury.

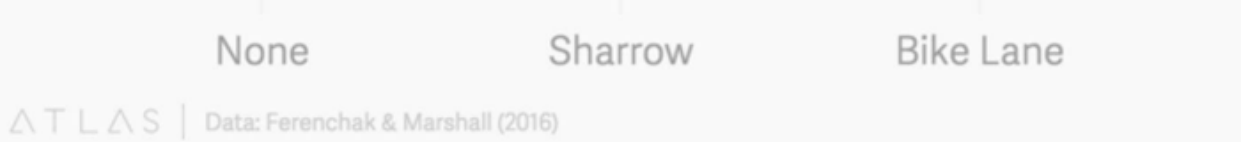
Recently civil engineering scholars Nicholas Ferenchak and Wesley Marshallof the University of Colorado at Denver decided to take a closer look at the sharrow safety question. They gathered data on more than 2,000 blocks of Chicago in 2000 and 2010, cataloguing where sharrows were painted during this time, where bike lanes were installed, or where no cycling infrastructure emerged. Then they layered on statistics about bike commuting and street collisions.

The analysis revealed two clear messages. The first was that bike lanes were far more effective than sharrows when it came to encouraging more cyclists to a given block; sharrows, in turn, had only "slightly larger" increases in bike commuting than places where no infrastructure was built, as well as the smallest percent change, according to Ferenchak and Marshall. That's a bad sign since cycling is known to show safety in numbers, likely because drivers become more aware of riders.



The more direct safety measure was equally discouraging. The number of injuries that occurred per 100 cyclists in a given year decreased the most in areas that installed bike lanes, nearly 42 percent. That's not too surprising, but Ferenchak and Marshall also found that injuries in blocks with sharrows only declined about 20 percent–*less* of a decrease than occurred in Chicago blocks where no bike infrastructure was created at all, nearly 37 percent.





Just why sharrows increase injury risks is unclear; they might give riders a false sense of security, especially inexperienced ones. What is clear in the Vision Zero era is that truly prioritizing bike safety means building separated bike lanes. The results should be confirmed in other cities for good measure, but they certainly seem to suggest that sharrows are poor substitutes for bike lanes at best and "more dangerous than doing nothing" at worst, write Ferenchak and Marshall.

They conclude, in a working paper recently presented at TRB 2016, with some harsh words:

> As sharrows do not provide designated space for bicyclists and do not enhance the overall bicycle network, all cities should (as many already have) begin to consider sharrows simply as signage as opposed to actual infrastructure. It is time that sharrows are exposed for what they really are, a cheap alternative that not only fails to solve a pressing safety issue, but actually makes the issue worse through a sense of false security.